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A DESCRIPTIVE STUDY OF THE INSTITUTIONALIZED ADOLESCENT MALE DRUG ABUSER

BY

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled A DESCRIPTIVE STUDY OF THE INSTITUTIONALIZED ADOLESCENT MALE DRUG ABUSER, submitted by Thomas Harold Wispinski in partial fulfilment of the requirements of the degree of Master of Education.

ABSTRACT

This study was designed to describe male adolescent drug abusers who were admitted to the Alberta Hospital in Edmonton, using the information to help establish more effective therapeutic programs for the drug abuser than already exist.

The data were obtained from the files of 37 male adolescents ranging in age from 15 to 19 inclusive, who were hospitalized between August 1, 1970 and May 31, 1971. Variables studied were education, religion, interpersonal relationships with family and peers, father's occupation and income, physical health, mode of admission into hospital, drugs used, psychological tests and reports, length of stay in hospital, ward behavior, and the therapies the drug abuser attained while in hospital.

The information obtained was expressed in terms of percentages and tabulated for each variable or factor observed.

This study did indicate that the institutionalized male drug abuser is an individual who has used drugs, especially L.S.D. and marijuana, on a frequent basis, has difficulties in the areas of interpersonal relationships, especially with the father, and has a generally poorer environmental situation.

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CHAPTER ONE

INTRODUCTION

The great concern given to drug abuse in the last few years is shown by the large number of articles, fictional and non-fictional, published in this area, and by the establishment and funding of monies to organizations such as "Trust" to deal with drug abuse. For example Brosseau (1970) suggests that in the city of Edmonton alone, some $90,000 dollars should be given to support three such organizations. However, when a topic is popular, the mass media such as television, radio and the press, tend to sensationalize the area of concern. Scientific research is thus needed to determine what is factual concerning the physiological and psychological effects that drug abuse has or may have on an individual. Articles in both areas tend to note the potential dangers rather than actual dangers. To date more research has been done on the physiological rather than the psychological effects. This is noted in various government pamphlets on drug abuse such as those released by the Alberta Alcoholism and Drug Abuse Commission (1969) where only one of the five areas covered deals with the reason adolescents use or abuse drugs. The other four deal with physical properties of the drug, physical hazards, demographic variables, and legal aspects regarding the use of drugs. Not only is more research needed in the psychological area, but most of the present research available concerned itself with a school population or the heroin, barbituate addict in a hospital setting. In regards to drug abuse the psycho-

logical area is defined as the description of the individual and his behavior before he started using drugs, while in a toxic state from the drug, and long term effects on behavior while in a non-toxic state. In this sense one is dealing with the effects of drugs on individuals discounting the immediate physiological or biochemical effects such as perception, distortion, sweating or possible convulsions.

It appears from hospital records that more and more adolescents are today being institutionalized in a psychiatric setting due to the abuse of non-physically addicting drugs. This then suggests implications to those staff who try to work with or treat such individuals. It would seem that before one is able to treat the institutionalized drug abuser one must know something about this specific population. The literature regarding this population would suggest that very little is known about these adolescents. Thus the writer feels that research in this area is needed, and since this situation is relatively new, as a first step it would seem beneficial to try to describe this population along various dimensions.

This study is descriptive in that it concerns itself with the quantitative or content analysis of documentary material. The writer attempts to describe a population of adolescent male drug abusers who were institutionalized at the Alberta Hospital in Edmonton, Alberta. Basically it involves describing these individuals on various dimensions that are obtainable from the main hospital files. These data includes such things as religion, family interpersonal relationships, peer relationships, test results,

psychological reports, type and amount of non-physically addicting drugs used and mode of admission into hospital. It is in considering these areas that one can describe the drug abuser in terms of personality, his environment, and the treatment he received in a psychiatric hospital setting. It may also help to clarify whether or not the male adolescent drug abuser is a passive, dependent, alienated individual with a poor family history as is suggested by much of the literature on this subject. It is hoped that this study will stimulate further research regarding this population so as to provide for the development of more effective treatment programs than already exist in this hospital.

In summary there seems to be a growing population of adolescent drug abusers in psychiatric settings, about which very little is known. It is the purpose of this study, by a descriptive method, to help determine possible characteristics of the institutionalized male adolescent drug abuser. This information will hopefully help to formulate more efficient therapeutic programs for these individuals than already exist.

CHAPTER TWO

REVIEW OF THE LITERATURE

An attempt will be made in this chapter to review the literature related to the study conducted by the writer. The first section of the review will deal with a brief history of drug use. This section will indicate that drug use in the past and drug use today are perceived differently due to the degree of acceptability and utility that it plays in different societies in different eras. The second section will deal with the incidence of drug abuse in the United States of America and Canada. This section deals with the rise in incidence of drug abuse and presents reasons why it is being seen as a problem in the 20th Century. The third phase will deal with the literature regarding the potential physiological and psychological dangers of specific drugs that are being abused today, so as to indicate what is already known about the non-physically addicting drugs with which the writer will be concerned with in the study. Finally, the focus of the fourth and last segment will be on the drug abuser himself, his environment, behavior and interpersonal relationships.

History of Drug Use

The use of drugs or chemicals to alter mood and perception is not a phenomenon unique to modern man. According to Griffenhagen (1970):

> The pleasurable use of opiates was well known among the ancient civilizations. Homer's Illiad describes

> the cup of Helen as "inducing the sense of evil" and a Sumerian tablet describes a herb which is thought to be opium as "the joy plant" (p. 117).

In discussing other drugs he states regarding cocaine, "The shrub was sacred to the Incas and had been used by Aztex priests for religious rites (p. 123)." Griffenhagen goes on to note the abuse of amphetamines around the year 1936 by psychology students at the University of Minnesota. Regarding Marijuana Griffenhagen (1970) states, "It has been claimed that the Emperor of China, Shen Nung (C. 2700 B.C.) was the author of a herbal called Pen Ts'ao which describes Cannabis ... (p. 127)." He further notes that,

> By 500 A.D., Cannabis had reached nearly all of Europe, and Islamic physicians were prescribing it for a variety of ailments. But traveling venders also were selling concoctions of marijuana as an aphrodisiac (p. 127).

In Mexico peyote was used in religious ceremonies by the Aztecs and it was in 1943 that Albert Hoffman discovered the effects of lysergic acid diethylamide tartrate or more commonly known as L.S.D. - 25. It is important to note that the use of some drugs in the past were more or less institutionalized, that is, their uses were condoned by the majority of the members in that society. However the use of similar drugs today, especially by young individuals, is considered illegal. Consequently drug abuse is being defined in terms of the illegal purchase and use of drugs.

Incidence of Drug Abuse

The incidence of drug abuse no longer only pertains to the slum dweller and heroin addict but rather as Farnsworth (1970) notes, "The drug problem now concerns and involved the well-fed, well-dressed, intelligent ... students and young adults of the

middle and upper classes ... (p. 111)."

Regarding the incidence of drug abuse in the United States it would appear that there has been an increase in drug abuse since 1962. Winick and Goldstein (undated) notes that, "In New York City, 779 cases of glue sniffing were reported to the Police Department Youth Division in 1962 and 2,003 in 1963 (p. 6)." The same trend is expressed by Louria (1968) when indicating concern over the incidence of marijuana use, "Life Magazine in July 1967, quotes an estimate that 10 million Americans have tried marihuana at least once (p. 8)." Louria (1968) further states that "Newsweek three weeks later ... suggested that as a reasonable guess between 300,000 and 4 1/2 million persons smoke it regularly (p. 8)." Similar concern is expressed by Brenner, Coles and Meager (1970). Louria (1968) regarding L.S.D. and amphetamine use present studies which indicate that two to six per cent of college students have had experience with L.S.D. and that the use of amphetamines may be as high as 40 per cent. Michael (1970) agrees with Louria regarding amphetamine use but gives a more conservative estimate indicated by a study by Blum, " ... 21% of the students reported to have ever taken amphetamines ... (p. 145)."

The writer's attention will now turn to incidence studies or reports of drug abuse in Canada. From recent literature it would seem that drug use on the whole has increased. As Smart and Fejer (1971) indicate, "The use of illicit drugs is higher in all grades in 1970 than 1968 (p. 4)." This opinion is shared by the Royal Bank of Canada Monthly Letter (1968), Munro (1968) and expressed in the following way by Unwin (1968) who mentions that

from 1966 to 1967 there was a 300% increase in convictions related to marijuana, that is, there were approximately 1300 arrests and 359 convictions in 1967. In contrast to these figures Time Magazine (1971) notes that, "In 1970, 6,270 people were charged with cannabis offenses (p. 4)." A similar trend holds true for amphetamines as noted by Smart and Fejer (1971). Brosseau (1970) states in referring to Edmonton, Alberta:

> The City Police records indicate that there is a continuing increase in drug abuse. Following is a summary of drug arrests in the City between 1966 - 1970.
>
> 1966 . . . . . 17 arrests
> 1967 . . . . . 77 arrests
> 1968 . . . . . 191 arrests
> 1969 . . . . . 338 arrests
> 1970 . . . . . 403 arrests
>
> (p. 12).

In summary there seems to be a continuing increase in drug abuse in both the U.S.A. and in Canada.

Potential Physical and Psychological Dangers

The stimulants, depressants, hallucinogens and solvent sniffing will be discussed in order regarding the potential physiological (biochemical) and psychological (behavioral-emotional) effects.

a) Stimulants

Regarding the potential psychological dangers Michael (1970) in 94 reported cases of amphetamine psychosis states that in regards to symptomatology there exists " ... delusions of persecution (83%), visual hallucinations (54%), auditory hallucinations (40%), tactile and olfactory hallucinations (18%) and excitation

(41%) (p. 143)." Such results are supported by articles published regarding amphetamines by the Narcotic Addiction Foundation of British Columbia (1969), the Government of Alberta, Committee on the Misuse of Drugs and Narcotics (undated), and the Addiction Research Foundation of Ontario (1969). Not only may psychological dependence develop but during the psychotic episode, that is, the presence of auditory or visual hallucinations, delusions, confusion and disorientation, behavior may become dangerous as the Department of National Health and Welfare, Consumer Division (1969) notes, "The psychotic feelings ... may result in violence, attempted suicide ... or imaginary fears ... although they usually disappear in a few days after the drug is discontinued ... (p. 3)."

It is also speculated and noted as fact that heavy amphetamine use can cause physical damage especially upon withdrawal from an amphetamine spree. Michael (1970) states:

> ... following abrupt withdrawal from large doses of amphetamine ... abnormal electroencephalographic (E.E.G.) patterns meet the usual criteria for a withdrawal symptom (p. 144).

Another danger seems to be in the area of damage to the heart and circulatory system after withdrawal which is noted by the Government of Alberta, Committee on the Misuse of Drugs and Narcotics (undated), in a pamphlet entitled, "The Crutch that Cripples, Drug Dependence." The Addiction Research Foundation (1969) goes on to note that:

> Physical risks of frequent and heavy use include weakness, skin trouble, nutritional problems, ulcers, pneumonia and convulsions .... Particularly large doses ... occassionally cause sudden death from cerebral hemorrhage or cardiovascular collapse (p. 2).

As can be seen then, when one abuses amphetamines (stimulants) he runs the potential risk of experiencing a psychotic episode in which his behavior may become irrational based on paranoid delusions, and also the chance of damage to the cardiovascular system.

b) Depressants (Opiates, Barbituates)

The psychological damage seems to result from the physical and psychological dependence that is developed rapidly as a result of abusing or using these drugs. Nyswander (1967) notes:

> Gerard holds that all juvenile addicts are very disturbed individuals .... One observes a flattened affect in some addicts .... Mistrust bordering on paranoid projections is frequently encountered (p. 618).

Physiologically the Addiction Research Foundation of Ontario (1970) notes; "Risk of frequent and heavy use of opiates induce constipation, loss of appetite, severe loss of weight, and malnutrition (p. 2)." The dangers of barbituates are noted quite harshly by Hoskin (undated) " ... in British Columbia alone, there were more than 100 deaths from barbituate overdoses in the past year ... (p. 5)." It is enough to say that the abuse of depressants (opiates and barbituates) are harmful, and that they are physiologically addicting as noted by the Narcotic Addiction Foundation of British Columbia (undated).

c) Hallucinogens

i) L.S.D., M.D.A., Mescaline, Peyote

Again one notes in the literature the possible dangers as related to one's emotions as a result of the induced drugs, and thus one's concomitant behavior caused by these emotions.

Levine (1969), the U.S. Department of Health and Welfare (1968), the Canadian Department of Health and Welfare, Consumer Division (1968), Paulas and Williams (1967) and Holmes (1966) all make special note of the emotional lability that is experienced by someone using L.S.D. and the possible consequences of either severe depression or acute anxiety panic reactions. The possible results of this emotional lability are succinctly stated by Smart (1968):

> The most serious complications include prolonged psychotic reactions, recurrent L.S.D. experiences, disturbed non-psychotic reactions, and less frequently, suicide, homicide, and convulsions (p. 4).

The Narcotic Addiction Foundation of British Columbia (undated) becomes a little more specific in their article:

> Panic or severe anxiety states, delusions of grandeur or persecution, suicidal tendencies and suggestability can result in severe psychological disturbance as well as physical harm to oneself and others (p. 7).

In regards to peyote and mescaline Pearson (1968) states, "Loss of personal identity in the extreme produces paranoid reactions ... (p. 2)." In regards to potential physical hazards of L.S.D. abuse, concern is indicated regarding the possibility of chromosomal damage. This concern is indicated by the Department of National Health and Welfare, Consumer Division (1968), Smart (1968), and the Addiction Research Foundation of Ontario (1969) which states, "Also, a number of studies have suggested that there is damage to chromosomes ... as a result of using L.S.D. (p. 2)." However it seems that more research isnneeded to verify this opinion. The physical danger of M.D.A. is noted perhaps unjustly on a single case reported by Time Magazine (1971), "One 17 year-old Edmonton

boy died of an M.D.A. overdose (p. 4)."

ii) Marijuana

The potential psychological hazards as seen in the literature regarding lethargy and non-productiveness is noted by Paulus and Williams (1966) who state:

> In studies on cases of prolonged use, subjects become indolent and non-productive and showed neglect of personal hygiene; they quickly lost interest in both assigned vocational tasks and recreational pursuits ... (p. 2).

This feeling is supported by Murphy (undated), the Narcotic Addiction Foundation of British Columbia (undated) in a pamphlet entitled "Drug Abuse", the U.S. Department of Health and Education and Welfare (1968), and the Government of Alberta, Committee on Misuse of Drugs and Narcotics (undated). The opposite extreme is indicated by Lehmann (1971) who states " ... and it can induce paranoia and schizophrenic responses needing emergency care (p. 118)." This point however is further clarified by the Narcotic Addiction Foundation of British Columbia (undated) in an article entitled, "The Dangers of Marijuana, Facts you should know", which states:

> It has long been known that marijuana and hashish can cause psychotic reactions, but usually such reactions are ascribed to individual idiosyncracies rather than being usual or common reactions to the drug (p. 4).

The serious possible physical complications due to abuse of marijuana seems to be distinct in one special area as noted by Lehmann (1971) who states, "Dr. Keith Yonge ... says ... that there is some evidence that they may include lasting changes in the chemical

processes of the brain cells (p. 120)." Thus in the case of marijuana abuse more possible dangers seem to be of the psychological type rather than physical type.

d) Solvent Inhalation

Psychologically the inhalation of solvents is generally agreed to produce the possibility of very aggressive behavior due to mental confusion, and psychological dependency which is indicated by Holmes (1966) who states, "The effects of glue-sniffing vary from mild intoxication ... to disorientation with acting-out aggressive behavior ... (p. 19).", and the Addiction Research Foundation of Ontario (1969) noting that, "Symptoms of psychological dependence occur which include craving and habituation (p. 2)." These findings are supported by the Department of National Health and Welfare, Consumers Division (1969), Pearson (1968) and the Narcotic Addiction Foundation of British Columbia (undated) in a pamphlet entitled "Drug Abuse". The most pervading possible physiological hazard seems to be concerned with organ damage and accidental death. As Holmes (1966) puts it, "The active ingredient is toluene, a benzine derivative, which may cause dysfunction of the liver, bone marrow and kidneys (p. 19)." This view is supported or noted also by the Narcotic Addiction Foundation of British Columbia (undated) in a pamphlet entitled "Drug Abuse", Pearson (1968), and the Department of National Health and Welfare (1969) which further states, "In some cases death was due to suffocation caused either by blockage of the air passages with vomitus or by the plastic bag used to contain the glue (p. 3)."

Thus the writer feels that the potential psychological and physical dangers resulting from drug abuse are varied. As Paulus and Williams (1966) so aptly note:

> The subjective effects of the drugs are exquisitely dependent not only on the personality of the user but also on the dose, the route of administration, and the specific circumstances in which the drug is used (p. 2).

Description of the Drug Abuser

The writer will describe, according to available evidence, the drug abuser on various dimensions including personality, family life, school and activities, peer relationships, and test results. It is important to note however, that much of the information that will follow pertains to the non-institutionalized drug abuser. Possible etiological factors will also be discussed as the writer feels that the descriptive environmental situation is often also seen as a factor that causes the adolescent to abuse drugs. Answers to the questions of why, and what type of adolescent abuses drugs seem wide and varied as Brosseau (1970) notes and Unwin (1968) states, "The motivations behind the use of these drugs by youth are highly complex and highly individual ... (p. 6)."

A great deal of the literature reviewed tends to view the drug abuser as a basically unstable dependent individual who is unable to cope with his environment due to feelings of inadequacy. This view is shared in part or whole by Schur (1965), Smeltzer (undated), Schiller (1970), Cohen (1966), The Alcoholism and Drug Addiction Research Foundation of Ontario (1968) and Winick and Goldstein (undated). Halliday (1966) and Farnsworth

(1970) go on to note that even though the drug abuser is basically unstable and takes drugs to obtain relief from anxiety, another important point may be that these individuals tend to set unrealistically high goals for themselves. It would seem plausible that in not reaching these goals the drug abuser reinforces his self-image of being inadequate and an underachiever.

One of the most frequently mentioned factors seems to deal with the drug abuser's family life and his resultant view of society and himself. A poor economic situation in the family may have little to do with the cause of most drug abuse today as indicated by Smart and Fejer (1970) who found that the greater percentage of the studied drug abusers usually come from a family in which the father was a professional man. It is also of note that the interpersonal relationships within the family tend to be unsatisfactory for the adolescent as Paulus (1966), The Narcotic Addiction Foundation of British Columbia, The Royal Bank of Canada Monthly Letter (1968), Louria (1968), Halliday (1966) and the Addiction Research Foundation of Ontario (1969) indicate. More specifically the Addiction Research Foundation of Ontario (1969) support Smart and Fejer (1971) who state, "Those living with both parents were much less commonly drug users than those living with only one parent, other relatives, friends or alone (p. 6)." They also feel that the influence of the mother on the adolescent is stronger than that of the father in that an adolescent was more likely to take drugs if the mother also used drugs. The emphasis or importance of a mother's in-

fluence is shared by Mensh (1965). Schur (1965) and Cohen (1966) feel that drug abuse may be the result of inadequate masculine identification with the father. Thus it appears that the parental circumstances are a strong determinant as to whether or not an adolescent will abuse drugs.

Regarding school life and outside activities Smart and Fejer (1971) indicate that the drug abuser tended to do more poorly in school and participated in fewer supervised or school activities. It is further noted in various ways by other authors such as Spratto (1970), Smeltzer (undated), Schiller (1970) and Finlator (1970), that the drug abuser is using drugs as a need for challenge or risk taking to make his life more meaningful. This would suggest that academic achievement or recreational achievement may no longer constitute an important factor in the adolescent's life.

The importance of peers as an etiological and descriptive factor for drug abuse appears to be related to the group's pressure to conform and the strong need of the drug abuser to belong, feel accepted, and adequate as an individual. The importance of peer pressure is indicated by Smart and Fejer (1971), Spratto (1970), Smeltzer (undated), Schiller (1970), Mensh (1965) and Government Mental Health Agencies. Another area where investigation is just commencing is that of religion and the lack of importance it plays in the drug abuser's life.

This view has been expressed by the Narcotic Addiction Foundation of British Columbia (undated), Demos, Shainline and Thoms (1968), and Smart and Fejer (1971) who noted, "In 1970

as in 1968, use was higher among students of Jewish religious backgrounds and among students stating they had no religion (p. 5)."

In regards to psychological testing Smart and Fejer (1971) using a school population indicate that:

> Drug use was most clearly related to normlessness and the overall alienation scores of the students .... Drug use appears to be more consistently related to normlessness than to powerlessness or social isolation .... Users of ... hallucinogens do not have high social isolation scores ... are not likely to feel isolated from others (p. 7).

Hill, Haertgen, and Glaser (1960) as reported by Mensh (1965), based on drug addicts in a hospital setting state that one common characteristic on the Minnesota Multiphasic Personality Inventory (MMPI) test was a T-score of 70 on the Psychopathic Deviate (Pd) scale.

In summary, it would appear that the basic etiology of drug abuse may be related to poor family interpersonal relationships and a lack of internalized values either from parental models, educational or religious institutions. As a result the adolescent may set for himself unrealistic goals and find himself unable to cope with everyday matters such as school. Thus he may begin to feel inadequate, depressed and anxious. To alleviate these feelings he may abuse drugs and use the drug group to fulfill needs of adequacy, belongingness, and acceptance. This behavior then is seen as a rebelling against societal norms and values. Special caution should be exercised in drawing conclusions from the informational pamphlets regarding the potential physio-

logical dangers of drug abuse which are issued by government agencies. For rigorous scientific analysis this literature typically does not give adequate references concerning source and validity of the information it presents. In order to verify and expand on knowledge regarding the institutionalized adolescent male drug abuser the writer proposes the following research design as carried out at the Alberta Hospital in Edmonton, Alberta.

CHAPTER III

RESEARCH DESIGN

The writer, having obtained information from the Alberta Hospital files, will describe 37 male adolescents from ages fifteen to nineteen inclusive, who were admitted into the Alberta Hospital, Edmonton between August 1, 1970 and May 31, 1971, and who were diagnosed by hospital medical staff involved, as drug abusers.

In the literature reviewed, it came to the writer's attention that many of the articles referred to adolescents in a school setting. These adolescents who have used drugs illegally have been referred to as drug addicts, drug abusers, or drug users. For purposes of clarification and because of the nature of this study, drug abuse will be defined arbitrarily as the chronic or periodic use of a non-physically addicting drug which has been obtained in an illegal manner. There is a compulsion to take the drug, a possible tendency to increase the dose, detrimental effects on the individual or society, and a general psychological dependence to it. This definition thus eliminates abusers of physically addicting drugs or the hard-core addict as addiction is defined by Smith and Mikeal (1970), Meyer (1969), and Nyswander (1967). It also eliminates the individual who abuses a drug which is legally obtained and the individual who uses drugs illegally but the use does not appear to be detrimental to the individual's ability to cope with his environment.

The Hospital File

Each hospital file contains basic forms or information sheets on the patient. The writer will describe these forms in terms of three characteristics: (1) Which member of the hospital staff completes the form; (2) When the form is filled out and; (3) What information the form generally contains.

1) Admission Form: This form is completed by the admission clerk and duty doctor when the patient first comes to the hospital. The admission clerk obtains information such as admission date, name, sex, age, religion, occupation, marital status, education, nearest relatives, mode of admission, family income, and source of information, whether it be the police, the patient himself, friend or relative. The duty doctor notes the patient's psychiatric state, the reason for admission into hospital and formulates a diagnostic impression.

2) Ward Admission Record: This form is oompleted by the nursing staff when the patient first arrives on the ward to which he is assigned. This form will note the reaction of the patient to the admission procedure and hospitalization, general physical condition and any chronic medical conditions or abnormalities, such as diabetes or a limp.

3) Ward Notes: These sheets are filled out by the nursing staff daily for the first week and weekly thereafter until the patient is discharged from hospital. These sheets contain information regarding the patient's general behavior on the ward.

4) Personal History Sheet: This sheet is filled out by the doctor who is in charge of the patient. It is usually done

after several interviews with the patient and usually contains information regarding the history of the patient's emotional illness, personal history as a child, social history, and a diagnostic impression of the patient.

5) Physical Examination Form: This form is filled out by the doctor in charge after a physical examination and usually within the first three days after admission. On each form is a summary of the medical findings.

6) Psychological Report: This report is made by the psychologist who has interviewed and tested the patient usually within a week after admission. At the end of each report the psychologist usually summarizes his findings.

7) Social History: This report is made out by the psychiatric social worker upon a referral basis from the doctor. Therefore not every patient's file will contain this report. The reports include and denote the presenting problem, history of the emotional and any physical illnesses, family relationships, personal development and a summary of the findings. This information is obtained from parents, friends, relatives, the patient himself; and any significant others.

8) Certificates: These certificates are filled out by the doctor or the court certifying the individual and thus committing him to hospital for observation or treatment through legal channels. They must contain the reason for certification.

9) Discharge Summary: This form is filled out by the doctor in charge when the patient is ready to be discharged from the hospital. It generally contains information pretaining to the

patient's progress and the treatment received while in the hospital. Also noted is the discharge date and to whom or where the patient is going upon leaving the hospital.

As can be seen, data given in the above mentioned forms within the file is subjective in nature, and ideal if completed.

Scales Used

1) Rating Scales

The data sheet used by the writer in this study can be seen in the appendix section. As is noted all the variables are denoted by alphabetical letters. Variables or factors H (Family History), I (Peer Relationship), K (Patient's Physical Health), and R (Ward Behavior) will be rated as good, poor, or not noted, defined thus:

1) Good: The drug abuser will be rated in this category if positive comment (s) are in the file regarding the area of concern or factor being considered.

2) Poor: The drug abuser will be rated in this category if negative comment (s) are in the file regarding the area of concern or factor being considered.

3) Not noted: The drug abuser will be rated in this category if no comment (s) are in the file regarding the area of concern or factor considered. The data sheet also contains space where the comment (s) which determine the rating given, can be recorded. Because of the subjective nature of these ratings, an inter-rater reliability check with a random sample of 10 files was independently done by a second rater.

2) Blishen Scale

Variable J (Father's Occupation or Income) will be used to rate the drug abuser's family into one of three classes, that is, upper class, middle class or lower class, by the use of a socio-economic index developed by Blishen (1967). In 1958, Blishen described a system whereby occupations can be ranked in terms of socio-economic status, noting only two factors; education and income. In this way the Blishen approach results in ratings for nearly all occupational titles. The scale was revised with 1961 census data. For the 1961 index only occupations related to the male working force were used on the assumption that the family's social status is dependent upon the husband's occupation even though the wife may be working. Within the range of index scores ranging from 25.36 to 76.69 there are 320 occupations listed. A mean socio-economic index was calculated for each province and also the percentages of individuals falling in class intervals of 10 on the index. Thus for Alberta it would appear the mean index is 39.20. If one divides up the total working class in Alberta one finds that 33% obtain an index below 30, another 33% obtain index scores between 30 and approximately 42 and the other third obtain index scores of 43 to 70% plus. Therefore for the purposes of this study, lower class will be the individual who obtains an index score of less than 30, middle class will be defined as obtaining an index score of 30 to 42 and upper class will be defined as obtaining an index score of 43 to 70 plus. In the case that occupation of the drug abuser's father is not given; however, the father's income is noted, the writer, for the purposes of this

study, will rate lower class if the income is below $5,000.00 annually, middle class if the income is from $5,000.00 to $10,000.00 and upper class for the individual who is earning $10,000.00 plus annually.

Explanation of Data Sheet

Within this section the writer will explain each factor on the 'Data Sheet" as it is coded from A to R. It is of note however, that codes A, B, F, G, are not true variables studied, but will be explained by the writer for the sake of information and contribution in calculating other variables.

A: Code Number: Numbers from 1 to 37 will be assigned each individual in the study for the purpose of confidentiality and the regulations set by the Alberta Hospital Research Committee. The lower numerals will pretain to the individuals who were admitted in August 1970 and progress upwards to the individuals who were admitted in May 1971.

B: Birthdate: This will be the birthdate of the individual as it is indicated on the admission form and will be designated by numerals for the year, month and day.

C: Age: This will be the individual's chronological age as calculated by subtracting his birthdate from the admission date into hospital, and on the data sheet will be indicated in years and months.

D: Education: This will indicate the degree of formal education the individual has received or obtained as noted on the day of admission into hospital, and will be denoted by grade.

E: Religion: This will be the religion which the individual

professes to belong to on the day of his admission into hospital.

F: Admission Date: This is the day the individual was admitted into hospital and it will be denoted numerically for the year, month and day of his admission.

G: Discharge Date: This is the day the individual is formally discharged from hospital by the doctor in charge, and will be denoted numerically for the year, month and day of discharge.

H: Family History: Relationship with: This variable will attempt to rate the individual's interpersonal relationships with his father, mother, brother (s), sister (s) and rated on the aforementioned good, poor and not noted scale. Information to rate this variable will be gathered from positive, negative or the absence of comment (s) from the individual's complete file. Also noted will be the existence or non-existence of drug use by other members of the individual's immediate family, in regards to type and the position the other individual holds in the family. The inter-rater reliability is 75 per cent.

I: Peer Relationships: This section or variable will attempt to describe in what manner and to what degree the individual related or socialized with his peers, either within the school setting, or the drug sub-culture. The interpersonal relationships will be rated as good, poor, or not noted as indicated by positive, negative or lack of comment (s) on the individual's complete file. The inter-rater reliability is 90 per cent.

J: Father's Occupation or Income: This variable will note the father's occupation or annual income using this data to

rate the individual's family, through the use of the Blishen Scale, in regards to lower, middle, or upper class socio-economic status.

K: Patient's Physical Health: This will be determined by the medical doctor's summary upon the physical examination form and will then be rated as good, poor, or not noted as positive, negative or a lack of comment (s) is perceived upon this form. The inter-rater reliability is 90 per cent agreement.

L: Mode of Admission to Hospital: This variable will deal with the manner in which the individual came to be a patient in the hospital, under three basic categories:

i) Voluntary Admission: An admission is deemed voluntary when an individual desires to be a patient in the hospital on his own accord and thereby agrees to stay in hospital for a period of at least seventy-two hours. At any time during the patient's stay in hospital he is allowed to, by giving proper notice to the doctor in charge, leave the hospital after 72 hours have elapsed from the time the notice was submitted to the doctor in charge.

ii) Certificate (s): A mode of admission whereby an individual is committed into hospital upon the advice of one doctor in emergency cases and two doctors otherwise. The individual is then not allowed to leave the hospital unless he is formally discharged by the doctor in charge.

iii) Legal: The individual is admitted to hospital on a remand from the courts either for observation or treatment. The individual is then not allowed to leave the hospital without consent

of the courts and usually upon the advice of the doctor in charge.

In all modes of admission the reason or the behavior of the individual which has precipitated his admission into hospital will be noted.

M: Drugs Used: This variable will deal with the non-physically addicting drugs that the individual has used, and the extent of use of each drug denoted in times per year, months, weeks or days. The basic category of drugs considered will be hallucinogens, stimulants, and solvent inhalation. The non-physically addicting nature of hallucinogens is noted by the Canadian and U.S. Government Health Agencies, Lehmann (undated), Murphy (1966), Pearson (1968), Smart (1968), Cohen (1966), and Holmes (1966). In regard to the non-physical addicting nature of amphetamines, this point is noted by Holmes (1966), Demos, Shainline and Thoms (1968), The Narcotic Addiction Foundation of British Columbia (1969). The same view in regards to addiction for solvent inhalation is noted by the Narcotic Addiction Foundation of British Columbia (undated), and The Addiction Research Foundation of Ontario (1969). Specifically noted will be the drug most frequently used and the extent of use in terms of times per year, month, week or day.

N: Length of Drug Use Prior to Admission: The length of drug use prior to admission will be obtained by examination of the file in detail. The length of drug use will be denoted by years and months.

O: Psychological Report: Summary: This variable will be the verbatim summary on the psychological report. This factor will

be examined in both a qualitative and quantitative manner due to the many possible areas that may be mentioned within the summary.

P: MMPI Scales: The Minnesota Multiphasic Personality Inventory (MMPI) was used in this study due to its popularity as a psychiatric, descriptive and diagnostic instrument in regards to personality and also due to its satisfactory reliability and validity as noted by Hathaway and McKinley (1967). The writer feels that before the scales used in this study are defined specifically a few brief comments will be made regarding the rationale, development and general interpretation of the MMPI. The basic information noted is taken from a handbook based on a series of lectures by Cuadra, and Reed at the Veterans Administration Hospital (1954). The bibliography for this handbook contains a good number of individuals who are very familiar with the use and interpretation of the MMPI test. Among these individuals are Hathaway, McKinley, Meehl and Welsh.

i) Rationale: The construction and development of the MMPI by McKinley and Hathaway started in 1937; due to the failure of earlier objective personality tests in the early 1930's that is, tests with scales constructed on a purely apriori basis. In the beginning the MMPI was only intended by its authors to be useful in the diagnosis of psychoneurosis. However in time more and more scales were added to measure further personality variables such as the behavior and thinking patterns pertaining to the character disorders and psychotic states.

ii) Development: From an original 1000 or so items gathered from reading both psychological and psychiatric materials

and other tests in the area, an attempt was made to design declarative statements in simplified language. The items were then administered to 821 patients answering true or false to each statement. The statements or items were also administered to a control group consisting of 724 normals who had accompanied friends or relatives to the University Hospital Clinic, 265 pre-college high school graduates, 265 normal skilled workers, and 254 patients in the general wards of the University Hospital. In this way and in a similar manner the following scales evolved, that is, Question score (?), Lie score (L), Validity score (F), Correction scale (K), Hypochondriasis scale (Hs), Depression scale (D), Hysteria scale (Hy), Psychopathic Deviate scale (Pd), Masculinity-Femininity scale (Mf), Paranoia scale (Pa), Psychasthenia scale (Pt), Schizophrenic scale (Sc), Hypomanic scale (Ma), and the Social Introversion scale (Si).

iii) Interpretation: The interpretation of the MMPI can be accomplished by interpreting each scale separately, by the slope or general elevations of neurotic versus psychotic scales, or by each scale in combination with significant other scales. Interpreting the MMPI using all methods is referred to as profile analysis. Within profile analysis one looks at basically three characteristics:

a) Elevation: Elevation is denoted by a T-score. Cuadra and Reed (1954) note that within a hospital setting the probability of two scales being T-score 70 is less than one in 1000, and the probability of a normal obtaining 3 scales of T-score 70 is one in 35,937. Due to this finding, the writer, for analytic purposes,

will in this study consider a T-score of 70 or more as significant, and also a T-score of 40 or less as significant due to the above mentioned factors, and also due to subjective experience that these types of deviations are commonly seen in individuals within this psychiatric setting.

b) Phasicality: That is, the trend of a very jagged profile rather than a relatively flat profile.

c) Slope: The trend that a neurotic profile tends to slope from left to right on the profile sheet and a psychotic profile tends to slope from right to left. Since this study will concern itself with only five scales of the MMPI the descriptive information received will be on the basis of elevation only.

Each scale studied will now be discussed in terms of development and content. The following information will be exact quotations as taken from Cuadra and Reed (1954). These scales were used due to their relevance to the literature as denoted in Chapter Two, as they deal with conduct disorders, psychotic states, and the symptomatology involved.

a) Psychopath Deviate (Pd)

> Development: Normals were contrasted with persons who were regarded as showing absence of deep emotional response, inability to profit from experience, and disregard of social mores.
>
> Content: Fifty items having to do with social maladjustment and absence of strongly pleasant experience. Items include:
> (1) Complaints against family
> (2) Feeling of being victimized as a child
> (3) Boredome and lassitude
> (4) Feelings of alienation from the group -- not being in on things.
>
> Interpretation: Like Hy this is a "character" rather than symptomatic scale. The group as a

whole is characterized by non-internalization of recognized conventions. Many show poor planning and shallow social relationships. They make a good impression at first and sometimes give evidence of great insight. However, the rules they verbalize are usually disregarded in actual behavior. High Pd's are likely to be moody and resentful, although as mentioned above, this is not often apparent on first acquaintance. Low Pd scorers are conventional, rigid and over-identified with social status (College Dean type). Meehl's study of 22 patients with low Pd show entire group characterized by low level of hetero-sexual aggressiveness (p. 14).

b) Paranoia (Pa)

Development: This scale was developed by contrasting normals with patients characterized by suspiciousness, over-sensitivity and delusions of persecution.

Content: There are 40 items, falling into three major groups:

i) Sensitivity, thin-skinnedness, easily hurt.
ii) Excessive moral virtue, claimed rationality and denial of suspicion, and
iii) Complaint of persecution and suspiciousness.

Interpretation: ... High Pa scorers tend to be suspicious, and brooding, tend to nurse grudges and usually feel that they are not getting their just dues. Therapy with them is most difficult: they are rigid, hard to convince or persuade. Low Pa scorers do not present a clear cut syndrome, but they tend to be somewhat evasive, and stubborn (p. 16).

c) Schizophrenia (Sc)

Development: Normals were contrasted with a heterogeneous group of schizophrenics and schizoid patients.

Content: There are 78 items, including - (1) social alienation and isolation; (2) complaints of family alienation; (3) bizarre emotions; (4) delusions; (5) somatic symptoms; (6) influence of external agents; (7) peculiar dysfunctions of body, and (8) dissatisfaction, depression.

> Interpretation: Patients who are clinically most schizophrenic get T-scores in the 80-90 range. Agitated neurotics, pre-psychotic persons usually score the highest on Sc.
>
> High scorers almost always feel alienated, misunderstood, out of place. Among them are socially introverted people who relate poorly, and may be somewhat secretive, autistic day-dreamers with unrealistic attitudes ... (p. 19).

d) Hypomania (Ma)

> Development: These items were derived from the responses of a group of clinically hyperactive patients. The general syndrome exhibited by these patients consisted of an elated but unstable mood, psychomotor excitement, flight of ideas, and ego-centricity.
>
> Content: The 46 items include clusters on (1) expansiveness and egotism, and (2) irritability. The Harris subscales divide Ma into four clusters: (1) Amorality (associated with high Pd); (2) Acceleration; (3) Imperturbability, and (4) Ego inflation.
>
> Interpretation: This is one of the MMPI "character" scales .... Between a T-score of 60-70, the person is likely to be pleasant and outgoing. Above this, there is increasing likelihood that the person will be hyperactive, enthusiastic for short periods of time, and will tend to have many irons in the fire, all of which are quickly abandoned. Difficulty with academic work is fairly frequent in this range, seemingly because the person can't sit still long enough to study. Low scorers often show listlessness, apathy, and lack of drive. They seem to have enough ability to accomplish their goals but lack motivation -- especially when Pd is also low (35 - 40). Low scorers do not always indicate a phelgmatic person, but in almost every case they do indicate a low degree of self-confidence and a lack of normal optimism (p. 19).

The Si scale is not mentioned by Cuadra and Reed (1954); however, in a book by Dahlstrom and Welsh (1965) regarding the Si scale it is noted:

> Development: Scale 0 was first published under

> the designation Social I-E by L.E. Drake (1946). The scale items were chosen by contrasting groups of students in the guidance program at the University of Wisconsin who scored above the 65th centile rank and below the 35th centile rank on the subscale for social introversion - extroversion in the Minnesota I-S-E Inventory (p. 77).

Content: This scale is made up of 69 questions dealing with a person's uneasiness in social situations or in dealings with others. Other items cover a variety of insecurities and worries. Butcher (1969) interprets the Si scale as follows:

> Scores above 70 will on rare occassions identify a schizoid factor in well controlled, socialized psychotic personalities when this is missed by other scales. Low scorers on 0 are sociable, warm people. Extremely low scores suggest a certain flightiness and superficiality of relationships, these hail-fellow-well-met individuals have well developed social techniques and very many contacts, but they do not establish relationships of real intimacy (p. 296).

Q: Therapies Attained by the Drug Abuser While in Hospital:

Indicated in this section will be the therapies in which the individual participated while in hospital as indicated by the doctor in charge.

R: Ward Behavior: This is the behavior the individual evidences on the hospital ward as noted by the nursing staff everyday for the first week and weekly thereafter. The behavior will be rated as good, poor, or not noted as evidenced by positive, negative or lack of comment (s) on the hospital file. The inter-rater reliability is 70 per cent.

S: Length of Stay in Hospital: The time the individual has been in hospital denoted by months and days calculated by subracting the admission date from the discharge date.

In summary, the data sheet being a reflection of the study, concerns itself in a broad manner with environmental, behavioral, demographic and personality dimensions.

CHAPTER IV

PRESENTATION AND INTERPRETATION OF DATA

The information or data obtained from this study is of a subjective nature; and therefore is in danger of error in two basic ways. Firstly, the patient may be in error regarding the information he reveals to hospital staff. Secondly, there may be misinterpretations or selective perception on the part of the hospital staff who report on the patient in a written manner. The data obtained will be presented through the use of tables with results indicated in percentages. After each table, the results will be described and if appropriate, possible explanations of the obtained results could be given. Wherever possible the results will be discussed in the context of the literature reviewed.

TABLE I

PERCENTAGE OF MALE INSTITUTIONALIZED DRUG ABUSERS IN AGE CATEGORIES

Age Range	15 - 0 to 15 - 11	16 - 0 to 16 - 11	17 - 0 to 17 - 11	18 - 0 to 18 - 11	19 - 0 to 19 - 11
Percentage	13.51%	24.32%	19.64%	21.62%	21.62%

N=37

The mean age was 17 years 5 months, the mode 16 years to 16 years 11 months and the median 17 years 8 months. It would appear on Table I that most of the drug abusers were 17 years or older, which

may be due to the fact that at this age more and more adolescents are living apart from home and hence the greater freedom to use or abuse drugs and at the same time voluntarily admit themselves into hospital.

TABLE II

FORMAL EDUCATION OF MALE INSTITUTIONALIZED DRUG ABUSERS

Grade Level	6	7	8	9	10	11	12	Not Noted
Percentage	2.70	5.40	13.51	35.13	24.32	8.10	8.10	2.70

The majority of individuals as indicated by Table II received from nine to ten years of formal schooling. However, since the mean age is 17 years 5 months, one would expect that more individuals would have achieved grade eleven or twelve. This may be explained however by the fact that as is noted by Smart and Diane Fejer (1971) that the drug abuser loses interest in school and thus discontinues school. The discrepancy between the mean age and the grade level that the majority of individuals received would suggest that the male adolescent drug abuser came into hospital one or two years after he discontinued school.

TABLE III

RELIGIOUS DENOMINATIONS OF MALE INSTITUTIONALIZED DRUG ABUSERS

Religion	Roman Catholic	Protestant non-specific	No Religion	United Church	Greek Orthadox	Anglican
Percentage	35.13	27.02	13.51	13.51	5.40	5.40

N=37

Table III would seem to indicate that the largest single religious group is the Roman Catholic. The 35.13 per cent is somewhat higher as compared to the representation of male Catholics in the province of Alberta which is 22.6 per cent (Dominion Bureau of Statistics) for the 1961 census. The greater proportion of Roman Catholic drug abusers may be explained through consideration of various dimensions. It may be that Catholics of the previous generation tended to have had larger families due to their religious constrictions preventing the employment of sexual contraceptive measures. Consequently having a generally lower socio-economic status, they may have been less able to provide their children; who through the abuse of drugs could have profited from psycho therapeutic intervention; with the services of a private psychiatrist, psychologist or counsellor.

TABLE IV

FAMILY INTERPERSONAL RELATIONSHIPS OF THE MALE INSTITUTIONALIZED DRUG ABUSER

Rating	Good	Poor	Not Noted
Father	10.81%	75.67%	13.51%
Mother	35.13%	51.35%	13.51%
Brother (s)	8.10%	24.32%	67.56%
Sister (s)	13.51%	13.51%	72.97%

Table IV would seem to indicate that the male drug abuser seems to have poor interpersonal relationships with all members of his family, especially with his father and less so with his mother,

or siblings. However, due to the high percentage in the "not noted" category for the siblings, the results are questionable. Regarding cases reporting poor father-son relationships, ten saw their fathers as strict and domineering, while seven saw their fathers as aloof. Seven either were with foster fathers or step-fathers. Five drug abusers had fathers who were alcoholics, four abusers were living with one parent for a period of time due to divorce, two abusers were without fathers from an early age due to their father's death, two abusers saw their father as weak, poor communication was noted in two cases, and fathers were described as loving in two cases. Regarding relationships with mothers, seven drug abusers had foster mothers, five were described as nagging, four were divorcees, five were seen as overprotective, two were seen as aloof and one was considered an alcoholic. Whereas seven mothers were described as loving, only two fathers were described likewise. Within the small percentage of sibling inter-personal relationships noted, there existed one case of alcoholism, one case of schizophrenia, one case of over-dose of heroin and three cases of physical fighting between drug abuser and his brothers. One brother was in jail. While one abuser said he was jealous of his brother, another stated his brother always teased him. These data appear to agree with Schur (1965) and Cohen (1966) who note the lack of an adequate masculine identification figure in the home as a precipitating factor in regards to drug abuse. The non-identification with the prescribed masculine role in society may be further enhanced by the drug abuser than establishing a closer relationship with his mother if he sees his father as aloof, weak

or domineering. In regards to drug use of other members of the family it was noted only in 27.02% of the total number of cases. Of these noted cases 40% were fathers, 10% mothers, 60% brothers and 10% sisters. The parents were alcoholics while the siblings used L.S.D., hashish, toluene and heroin.

TABLE V

PEER RELATIONSHIPS OF THE MALE INSTITUTIONALIZED DRUG ABUSER

	Good	Poor	Not Noted
While Attending School	27.02%	48.64%	24.32%
After Quitting School	8.10%	45.94%	45.94%

N=37

The drug abuser's interpersonal relationships according to results on Table V, tended to be poor both while attending school and after leaving school. However, regarding his interpersonal relationships after he quit school, it is of note that in almost half of the cases no mention was made regarding this area in the drug abuser's hospital file. The 11 cases wherein the files noted this area, statements in the file indicated that the adolescent was doing well in school until approximately the same time he started using drugs. In nine cases it was noted that the abuser had trouble making friends, in six cases that he was very susceptable to peer pressure, in seven cases that truancy from school was involved. In five cases the abuser felt others were out to hurt him, four cases had histories of theft and acting out behavior, and four

drug abusers were described as immature. Two individuals were recorded as always having had trouble in school and only two were seen as introverts and one as lacking in social skills. It would appear then that the institutionalized male drug abuser was not necessarily a social introvert; however, his peer interpersonal relationships seemed to be on an immature level and difficulty appeared in the school setting, at approximately the same time the individual began to consume illegal drugs.

TABLE VI

SOCIO-ECONOMIC STATUS OF THE MALE INSTITUTIONALIZED DRUG ABUSER'S FAMILY

	Upper Class	Middle Class	Lower Class	Not Noted
Percentage	13.51%	24.32%	27.02%	35.13%

N=37

As can be seen by Table VI, the institutionalized male drug abuser comes from all strata within society as Dana L. Farnsworth notes (1970). If one considers only the cases which were noted on the file concerning this factor, 20.82% were of the upper class, 37.50% of the middle class, and 41.66% of the lower class. The higher percentage in the lower and middle classes may be the result of two factors:

1) The lower class male drug abuser may have additional environmental stress causing emotional breakdown such as lack of finances and larger families.

2) The upper class male drug abusers are more able to pay or obtain services which the lower or middle class male drug abuser

can not afford, hence the lower-middle class individual is attracted to the Alberta Hospital, Edmonton which is a free public facility.

Regarding physical health, 94.59% were seen as healthy and 5.40% were seen as unhealthy. The unhealthy individuals were seen to have hepatitis, and abnormal E.E.G. recordings.

TABLE VII

MODE OF ADMISSION OF THE MALE INSTITUTIONALIZED DRUG ABUSER

	Voluntary	Certificate	Legal
Percentage	54.05%	18.91%	27.02%

N=37

Most of the drug abusers came in on a voluntary basis as noted in Table VII, and were admitted due to such pathological symptoms as depression, anxiety, tension, sleep disturbance, poor eating habits and suicidal feelings. The abusers coming under certificate (s) were admitted for two basic reasons: an acute psychotic reaction or a suicidal attempt. Of the certificates, 10.81% were of an urgent type. The drug abusers admitted legally were seen primarily as behavior problems involving breaking and entering, theft and general acting out behavior. After being remanded to hospital, it was then discovered that these individuals also abused drugs.

TABLE VIII

PERCENTAGE OF MALE INSTITUTIONALIZED DRUG ABUSERS WHO USED SPECIFIC DRUGS

Drug	Percentage
L.S.D.	89.18
Marijuana	62.16
Hashish	45.94
Amphetamines	35.13
M.D.A.	27.02
Mescaline	21.62
Glue Sniffing	18.91
Cutex Sniffing	13.51
D.M.T.	2.70
S.T.P.	2.70
Belladonna	2.70

N=37

From Table VIII it would seem that the most popular illegal drug (that is, number of individuals who have tried the drug) consumed is L.S.D. and that the three most popular drugs are hallucinogens, followed secondly by stimulants (amphetamines, M.D.A.) and thirdly by solvent inhalation. This would make sense in the light of the great number of symptoms such as hallucinations, paranoid delusions as indicated by the reasons given for admission into hospital. However, relative to the drug which the abuser has most frequently used the order of preference or incidence of use changes from the order noted in Table VIII. The frequency of use of drugs is indicated in Table IX.

TABLE IX

THE PERCENTAGE OF MALE INSTITUTIONALIZED DRUG ABUSERS WHO STATED THE SPECIFIC DRUG AS MOST FREQUENTLY USED

Drug	Percentage
L.S.D.	27.02
Glue and Cutex	21.62
Marijuana	13.51
Amphetamines	5.40
Hashish	5.40
M.D.A.	2.70
Not Noted	21.62

N=37

Thus L.S.D. remains to be the most frequently used drug, as Table IX would indicate, by the institutionalized male drug abuser; however, solvent inhalation was noted as very frequently used, rather than stimulants, marijuana, or hashish. This may indicate a strong psychological dependence to the drug involved in solvents, that is, toluene.

Qualitatively, reasons given for admission into hospital are as follows:

TABLE X

DIAGNOSTIC IMPRESSIONS OF THE MALE INSTITUTIONALIZED DRUG ABUSER UPON ADMISSION TO HOSPITAL

Impressions	No. of Cases
Drug abuse	27
Psychotic symptoms	10
Hallucinations	6
Theft	5
Suicide Attempt	4
Breaking and entering	4
Paranoid delusions	4
Sleep disturbance	3
Depression	3
Suicidal tendencies	3
Confusion	3
Inappropriate affect	3
Glue sniffing	2
Cutex sniffing	1
Drug overdose	1
Tension	1
Disorientation	1
Irrational behavior	1
Flashbacks	1
Marijuana possession	1
Assault	1
Homicidal feelings	1

The majority of reasons are those of drug abuse and it would seem acute psychotic reactions. It is of note that while the voluntary drug abuser usually reports rather neurotic psychopathology, the certified drug abuser reports psychotic psychopathology. There was an average of approximately three impressions for each individual, when he was admitted into the hospital. Looking at the complete list of reasons, it becomes apparent that the male drug abuser who finds it necessary to enter a psychiatric institution is an emotionally unstable individual who is finding it difficult to cope with his environment. The same list of reasons for admission would also tend to support the potential psychological dangers of drug abuse as noted in the review of relevant literature, such as the presence of paranoid delusions and hallucinations which were indicated by Michael (1970).

TABLE XI

DISTRIBUTION OF THE MALE INSTITUTIONALIZED DRUG ABUSERS IN TERMS OF THE NUMBER OF DIFFERENT DRUGS USED

No. of different drugs	1	2	3	4	5	6	7	8
Percentage	21.62	18.91	13.51	24.32	13.51	2.70	5.40	0%

N=37

Table XI indicates that the majority of institutionalized male drug abusers use from three to five different types of drugs. It is of note; however, that the drug abuser who uses solvents, glue or cutex, generally does not use any other type of drug while the male adolescent who abuses "chemicals" uses a variety of both hallucinogens and stimulants.

TABLE XII

USE OF ANY DRUG BY THE MALE INSTITUTIONALIZED DRUG ABUSER AT THE HIGHEST POINT OF USAGE

Usage	One or more times per day	One or more times per week	One or more times per month	One or more times per year	Not noted cases
%	13.51	16.21	13.51	10.81	45.94

N=37

As only a little more than half the files noted in Table XII commented regarding the highest point of usage, interpretation is limited. However, it may indicate that the institutionalized male drug abuser probably uses drugs at least one or more times per week at the highest point of usage. Of the five cases who used drugs one or more times per day, two cases involved cutex, one case involved marijuana, one case involved M.D.A., and in one case the drug was not noted. Of the six cases who used drugs one or more times per week, five cases involved L.S.D. and one case involved glue. Of the five cases who used drugs one or more times per month, three cases involved L.S.D., one case involved hashish and in one case the drug was not noted in the file. Of the four cases who used drugs one or more times per year, all four cases involved L.S.D. It is of note that L.S.D. is again the indicated drug of choice, but that cutex was used the most frequently. The individuals who used drugs only once or twice a year were usually admitted to hospital due to a psychotic reaction to the drug.

TABLE XIII

LENGTH OF DRUG USE BY THE MALE INSTITUTIONALIZED DRUG ABUSER PRIOR TO ADMISSION

Length of Stay	0-5 Months	6 months 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5	Not Noted
%	5.40	16.21	37.83	16.21	16.21	0	8.10

N=37

Table XIII would indicate that the majority of the institutionalized drug abusers used drugs from one to three years prior to admission; the mean being 2 years 3 months, the mode being 2 years 0 months, and the median being 2.375 years. These results would seem to indicate when one considers the mean age of the abusers and mean educational level obtained, that the drug use started at approximately the same time the abuser quit school.

TABLE XIV

MMPI SCALES IN TERMS OF THE PERCENTAGE OF MALE INSTITUTIONALIZED DRUG ABUSERS OBTAINING SIGNIFICANT T-SCORES

Scale	T-Score	%	Scale	T-Score	%
Psychopathic Deviate (Pd)	70 >	37.83	Psychopathic Deviate (Pd)	< 40	0
Paranoia (Pa)	70 >	10.81	Paranoia (Pa)	< 40	0
Schizophrenia (Sc)	70 >	37.83	Schizophrenia (Sc)	< 40	0
Hypomania (Ma)	70 >	32.43	Hypomania (Ma)	< 40	0
Social Introversion (Si)	70 >	0	Social Introversion (Si)	< 40	0

N=37

There were 48.64% of the cases who did not have MMPI results. Table XIV however, notes that significant T-scores were all greater than T-score 70 and there was not one significant T-score of 40 or less on these scales. If one looks only at the 19 cases that had MMPI results, 14 cases had both scales Pd-Sc over the T-score 70; seven cases had three scales Pd-Sc-Ma over the T-score 70; and three cases had 4 scales Pd-Pa-Sc-Ma over the T-score 70. Three cases had only two scales Pd-Sc over the T-score 70; while two cases had only two scales Sc-Ma over the T-score 70 and one case had the three scales Pd-Pa-Sc over the T-score 70. Qualitatively the male drug abuser basically tends to be an acting out (sociopathic) type of individual who begins to feel very alienated from others. Of special note are the three cases having four scales over T-score 70, where the high Pa-Sc T-score may indicate that the drug abuser who comes to hospital due to an acute toxic psychotic reaction. In all the cases Sc was involved or over T-score 70. Thus it would appear that the institutionalized drug abuser feels alienated, misunderstood and out of place. He relates poorly to others, tends to be an autistic daydreamer with unrealistic attitudes. Also of special note is the lack of any one case noted having a social introversion score of greater than T-score 70 or less than T-score 40.

In summary then, the institutionalized male drug abuser is basically an acting out hyperactive individual who develops shallow interpersonal relationships possibly due to use of drugs, and in an idiosyncratic manner, begins to feel alienated and persecuted to such a significant degree that hospitalization is necessary.

TABLE XV

THE MALE INSTITUTIONALIZED DRUG ABUSER'S
LENGTH OF STAY IN HOSPITAL

Length of Stay	0 to one month	1 to 2 months	2 to 3 months	3 to 4 months	4 to 5 months	5 to 6 months
%	67.56	27.02	2.70	0	0	2.70

N=37

As indicated by Table XV the length of stay tends to be relatively short, usually less than a month. The mean is 27.24 days, the median 23.50 days, and the mode which is multiple, is three days, four days, seven days, eight days, 23 days and 24 days, each involving two cases. The shortness of the stay would bring into question what type of treatment can be effected in this short a time period. The therapies attained are as follows:

TABLE XVI

THERAPIES OBTAINED BY THE MALE
INSTITUTIONALIZED DRUG ABUSERS

Therapy	Percentage	Therapy	Percentage
Individual	45.94	Chemotherapy	37.83
Group	24.32	Electrical Aversion	21.35
Recreational	10.81	Occupational	8.10
E.C.T.	5.40	Relaxation	2.70
None	27.92		

N=37

Table XVI indicates that the traditional chemotherapy and individual therapy would seem to dominate modes of treatment for

the institutionalized male drug abuser. There would seem to be an increased interest in the psychological therapies (groups and electrical aversion therapy). However, it is of note that more than 1/4 of the users received no treatment at all. It is also of note that no mention is made of either family therapy or a drug educational program.

TABLE XVII

WARD BEHAVIOR OF THE MALE INSTITUTIONALIZED DRUG ABUSER

Rating	Good	Poor	Not Noted
Percentage	48.64	48.64	2.70

N=37

From Table XVII it would seem that ward behavior is not significant in either direction. However, a drug abuser who was noted poor was described by such terms as agitated, aloof, confused, negative, manipulating, suspicious, violent, and on one occasion delusional. The drug abuser rated as good was described as cooperative, cheerful, talkative, adaptable, relaxed, sociable, and a good mixer.

Regarding the psychological report summaries, there were 29.72% of the cases with no such summaries. However, of the remaining 26 cases which did have psychological reports, 15 were described as having hostile, aggressive acting-out impulses, 12 were described as dependent, feeling inadequate, withdrawn and gaining satisfaction through fantasy, and seven were seen to be of average or above intellectual ability. Seven were described as

having poor interpersonal relationships, six as being psychotic, four as having personality disorders, two as psychopathic and two as depressed.

In summary, the majority of the data have been presented in the form of tables and percentages. It is of note that regarding the areas of interpersonal relationships with siblings, peers outside school or after quitting school, socio-economic status and highest point of usage of any drug, that 25 or more per cent of the cases had no comments regarding the topic of concern. This then must be considered when drawing conclusions in these areas.

CHAPTER V

SUMMARY, CONCLUSIONS AND IMPLICATIONS

Within this chapter the writer will attempt in the first section, to describe the institutionalized male drug abuser, using the data gained from this study. The second section will deal with the implications this study may have for further research; while the third section will consider possible implications this study may have for the treatment of drug abusers in a psychiatric setting.

Description of the Institutionalized Male Drug Abuser

The writer using a standard data sheet, collected information on various dimensions regarding the male adolescent institutionalized drug abuser. The information was gathered from the Alberta Hospital in Edmonton, using the master file on each individual in the study. These data obtained were then expressed in percentages and commented upon in a qualitative manner. The trends in the data suggest that the following generalizations can be made about the male adolescent institutionalized drug abusers from ages 15 to 19 inclusive.

In regards to the institutionalized male drug abusers studied:

a) The majority tend to be 16 to 18 years of age chronologically.

b) The majority have an education in the Grade IX to X range, approximately one or two years behind what they should have attained in terms of their chronological age.

c) A large proportion are of the Roman Catholic faith possibly due to their lower socio-economic status as explained in Chapter IV of this thesis.

d) A large proportion report poor interpersonal relationship problems with parents, especially father, whom they may see as very strict, domineering, aloof, and as poor identification models.

e) About half of the subjects reported living in a broken home or a foster home, prior to admission into the Alberta Hospital, Edmonton.

f) About half reported to have poor interpersonal relationships with school peers especially at the time they started using drugs illegally.

g) The majority were raised in a lower or middle class home, tended to be in good physical health, and tended to come in voluntarily to the hospital, evidencing such symptoms as depression, suicidal feelings, sleep disturbances, anxiety, and having a history of illegal drug use. If however they were brought in on a certificate, they tended to evidence psychotic symptoms such as hallucinations, paranoid delusions, confusion, suicidal attempts in the past and possible inappropriate affect.

h) The majority prefered the use of L.S.D. and marijuana to other drugs, using from three to five different types of drugs pretaining to the hallucinogenic and stimulant categories. They may tend to use drugs approximately one or more times per week

at the highest point of usage. Whereas the abusers of hallucinogenics tended to use other drugs the abusers of solvent inhalation tended to use no other drugs. They may also have used drugs from one to three years on the average prior to admission into hospital.

i) From the MMPI results those who were admitted voluntarily, tended to show poor planning ability and shallow social relationships. They may generally be moody, resentful, and may act out in an impulsive manner. Difficulty with academic work may exist due to poor concentration powers and a short attention span. They generally feel alienated, misunderstood, exhibiting introversive or self-absorbed tendencies. With those who were admitted to hospital on a certificate one may evidence the added features of paranoid delusions of persecution, suspiciousness and argumentativeness.

In summary then, the institutionalized male drug abusers are individuals who have used drugs, especially L.S.D. and marijuana, on a fairly frequent basis. Due to possible poor family environments and poor interpersonal relationships with their fathers, whom they see as aloof, dominant and strict, the drug abusers quit school, begin to feel anxious, depressed, and confused about their position in the world. They thus begin to feel extremely alienated from others, possibly feeling at this point that life is no longer worth living.

Implications for Research

As mentioned in Chapter One, more research is needed to determine the psychological effects, or etiological factors of drug abuse. This study has verified to some extent, the potential psychological effects of drug abuse as indicated in Chapter Two by

Michael (1970), that is, the presence of paranoid delusions and hallucinations in a drug psychosis. Also supported are the symptoms of L.S.D. ingestion as indicated by the Narcotic Addiction Foundation of British Columbia (undated). This study has also verified to some degree the statements of Halliday (1966), Farnsworth (1970), Paulus (1966), Smart and Fejer (1971) and Hill, Haertgen and Glaser (1960) as noted in the review of the literature. This then would suggest that further descriptive studies may be beneficial in the area of drug abuse.

The reader is cautioned that the results are tentative due to the subjective nature of the factors or variables studied. It is suggested by the writer that further studies done in this area be designed in such a manner to elicit a more detailed psychological, sociological, psychiatric and medical history by a series of interviews held with the patient. In this manner more specific and valid information could be obtained in areas omitted by this study due to a lack of comment made on the patient's file. Such areas consisted of sibling interpersonal relationships, peer relationships in the drug culture, socio-economic status of the family the patient was raised in, specific frequency of drug use in relation to possible patterns of drug use, and objective test measures both in the personality and intellectual areas. In all of these areas less than 75% of the total number of cases studied commented on the specific area of concern. It is also of note that through this study one does not acquire knowledge with regard to how the institutionalized male drug abuser differs from the male adolescent who uses drugs, but is not in a psychiatric setting for treatment. If poor family

environments and especially poor relationships with the father is an important etiological factor, more research is needed of a longitudinal nature. Through psychotherapeutic intervention and the acquired knowledge gained from longitudinal studies regarding which individuals are very susceptable to the future abuse of drugs, one could prevent that individual from having to abuse drugs to cope with his environment; and thus possibly being admitted to a psychiatric institution.

Implications for Treatment

The most commonly employed treatment at the Alberta Hospital Edmonton to date for the institutionalized drug abuser, in his average length of stay of less than one month, seems to have been individual psychotherapy and chemotherapy. This would seem entirely at odds with the description of the drug abuser that this study and other studies have indicated. If it is valid to state that important etiological factors may exist in the areas of poor interpersonal relationships with peers and family, the relinquishing of achievement in school and recreation as valid goals or values; the exhibition of suicidal feelings, depression, alienation, frequency of drug use and possible religious conflicts, as this and other studies indicate, it becomes apparent that neither chemotherapy or individual psychotherapy is a desired treatment of choice. The writer thus proposes the following treatment program for drug abusers in a psychiatric hospital setting.

The drug abuser after admission into hospital, would be given the opportunity to partake in a specific therapy program to

which he would have to commit himself for at least a three month period. If he desires treatment he would reside in a specially structured ward where he could partake in different therapies concomitantly. This type of ward would include and operate on both humanistic and behavioristic frames of reference which would give the drug abuser (1) the security he needs upon admission to hospital due to feelings of alienation, depression, and anxiety, as noted by the MMPI test results, and (2) the controls which he may be lacking in regards to his own behavior, due to a lack of adequate models with whom he could identify in the past. If the drug abuser was in a toxic state, psychotic state, or an acute anxiety state he would receive chemotherapy, to improve the condition. During the first week a complete and detailed sociological, psychological, psychiatric and medical examination would be done so as to be certain to include all areas that may be significant and of concern to the drug abuser. The sociological examination would consist of several interviews involving the psychiatric social worker with the patient, his family, his relatives and his friends. The psychological examination by a psychologist would consist of several interviews with the patient, projective and objective testing to include the areas of intellectual ability, aptitude and interests in regards to a vocation, organicity, and personality variables. The medical and psychiatric examination would be completed by the doctor in charge. In this way it would be able to obtain a more exact picture of the total person, that one will be involved with in therapy. During the second week the drug abuser would attend the drug education program whereby he

would acquire up to date factual knowledge of the drugs that are abused by adolescents. The program would consist of the history, potential, physical and psychological dangers of drug abuse taught in a non-biased manner. Thus by the third week the reports from the respective disciplines would be completed and used to determine what type of therapy or combination of therapies the drug abuser will receive concomittantly. Thus the following therapies are seen as necessary.

a) Individual psychotherapy: Due to the extreme amount of time needed in this type of therapy, it would be limited to deal with an acutely withdrawn individual, or a specific concern the drug abuser is not able to deal with in a group setting. Thus this type of therapy could be used as a stepping stone in helping the drug abuser accept a group therapy situation.

b) Group therapy: This type of therapy would be aimed at helping the drug abuser establish more meaningful interpersonal relationships, and better ways of relating to others on an emotional level. In addition it would also help him deal with feelings of anxiety, depression and alienation that exist as this study would seem to indicate.

c) Family therapy: A drug abuser would partake in this therapy if the family situation was seen as an important etiological factor to the drug abuse. The therapy would be designed to help the drug abuser and his family, especially father, in learning to communicate with each other in a more honest, open, emotionally acceptable manner.

d) Electrical aversion therapy: This would be used to

help the drug abuser break the psychological dependency and learned habit of consuming drugs to cope with his inability to deal with his environment.

e) Recreational therapy and Occupational therapy: These therapies would be deemed secondarily important to the other therapies, but would allow the interested drug abuser a chance to develop creative potential, and learn to deal with others in a cooperative, or competitive and informal atmosphere.

It is of note that the drug abuser would also be given the opportunity to continue his education while in hospital, in such a setting as to have more individualized attention from the teacher, and an opportunity to relate to peers on an informal level. At the end of the three months time the drug abuser would be assessed for improvement and advised as to whether he should leave the hospital or remain in hospital for continued treatment. If the drug abuser leaves hospital it would be beneficial if he were to live in a group home so as to slowly integrate him back into society. This of course would only be necessary if the drug abuser was unable to again live with his parents.

In summary, the writer feels that further research and more effective treatment programs will enhance the hospital's efficiency in dealing with this relatively new population of patients. It has been attempted in this study to describe a specific population in the Alberta Hospital, Edmonton, namely the institutionalized adolescent male drug abuser. The writer feels that this task has been accomplished to some extent but much more remains to be done in research and treatment if society, in the

future, is to be able to understand and deal with the drug abuse phenomenon as it exists today, and may exist in 20 years time.

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A P P E N D I C E S

APPENDIX A

DATA SHEET

A. Code # _____ B. Birthdate ___ ___ ___ Yr. Mo. Day C. Age ___ ___ Yrs. Mos. D. Education _____

E. Religion _____ F. Admission Date ___ ___ ___ Yr. Mo. Day G. Discharge Date ___ ___ ___ Yr. Mo. Day

---

H. Family History: Relationship with:

1) Father

(a) good _____

(b) poor _____

(c) not noted _____

---

2) Mother

(a) good _____

(b) poor _____

(c) not noted _____

---

3) Brother (s)

(a) good _____

(b) poor _____

(c) not noted _____

---

4) Sister (s)

(a) good _____

(b) poor _____

(c) not noted _____

---

5) Drug use in Family: Present _____ Not Present _____

type _____

by whom _____

I. Peer Relationships:

1) School

(a) good _____

(b) poor _____

(c) not noted _____

2) Drug Sub-culture

(a) good _____

(b) poor _____

(c) not noted _____

J. Father's Occupation or Income

Occupation: _____ Income: $ _____/year

Blishen Scale: lower class _____

middle class _____

upper class _____

K. Patient's Physical Health

(a) good _____

(b) poor _____

(c) not noted _____

L. Mode of Admission to Hospital:

Voluntary _____ Certificate (s) _____ Legal _____

Reason for Admission:

(1)

(2)

(3)

M. Drugs Used:

Type	Extent of Use
1) Hallucinogens	
a) L.S.D.	_____
b) Marijuana	_____
c) Hashish	_____
d) Peyote	_____
e) Mescaline	_____
f) D.M.T.	_____
g) D.O.M. (STP)	_____
h)	_____
2) Stimulants	
a) Amphetamines	_____
b) Dextroamphetamines	_____
c) Methamphetamines	_____

---

3) Solvent Inhalation

a) Gasoline _____

b) Glue _____

c) Nail Polish _____

d) _____

Drugs Used Most Frequently _____

N. Length of Drug Use Prior to Admission:

_____years _____ months

O. Psychology Report: Summary

P. MMPI Scales (T-Scores)

Pd _____ Pa _____ Sc_____ Ma _____ Si _____

Q. Therapies Attained by Drug Abuser While in Hospital:

(1) (4)

(2) (5)

(3) (6)

R. Ward Behavior:

(1) good _____

(2) poor _____

(3) not noted _____

S. Length of Stay in Hospital:

_____ months _____ days

APPENDIX B

Blishen Scale

A Socio-Economic Index for Occupations in Canada

Occupation	Socio-Economic Index
Chemical Engineers	76.69
Dentists	76.44
Professors and College Principals	76.01
Physicians and Surgeons	75.57
Geologists	75.49
Mining Engineers	75.42
Lawyers and Notaries	75.41
Civil Engineers	75.16
Architects	74.52
Veterinarians	74.46
Electrical Engineers	74.34
Professional Engineers, n.e.s.	74.27
Physicists	73.81
Optometrists	73.77
Biological Scientists	73.22
Physical Scientists, n.e.s.	72.94
Pharmacists	72.87
Mechanical Engineers	72.78
Judges and Magistrates	72.24
Economists	71.90
Chemists	70.94
Industrial Engineers	70.43
Osteopaths and Chiropractors	70.25
School Teachers	70.14
Accountants and Auditors	68.80
Owners and Managers, Education and Related Services	68.32
Actuaries and Statisticians	67.78
Computer Programmers	67.50
Owners and Managers, Services to Business Management	67.28
Agricultural Professionals, n.e.s.	66.96
Owners and Managers, Chemical and Chemical Products Industries	66.79
Advertising Managers	66.05
Air Pilots, Navigators and Flight Engineers	66.04
Owners and Managers, Electrical Products Industries	65.78
Owners and Managers, Primary Metal Industries	65.29
Owners and Managers, Paper and Allied Industries	64.78
Owners and Managers, Finance, Insurance, Real Estate	64.52
Authors, Editors, Journalists	64.23
Owners and Managers, Rubber Industries	64.09

Occupation	Socio-Economic Index
Owners and Managers, Machinery Industries	63.76
Librarians	63.75
Owners and Managers, Petroleum and Coal Products Industries	63.02
Sales Managers	62.04
Owners and Managers, Mines, Quarries, and Oil Wells	61.99
Owners and Managers, Textile Industries	61.96
Owners and Managers, Transportation Equipment Industries	61.75
Professional Occupations, n.e.s.	60.93
Credit Managers	60.81
Office Managers	60.42
Owners and Managers, Health and Welfare Services	60.07
Security Salesmen and Brokers	59.91
Radio and Television Announcers	59.81
Owners and Managers, Printing, Publishing and Allied Industries	59.69
Owners and Managers, Federal Administration	59.60
Owners and Managers, Knitting Mills	59.28
Clergymen and Priests	59.20
Owners and Managers, Miscellaneous Manufacturing Industries	58.29
Other Health Professionals	58.27
Artists (except commercial), Art Teachers	58.21
Insepectors and Foremen, Communication	58.17
Draughtsmen	57.82
Owners and Managers, Metal Fabricating Industries	57.60
Owners and Managers, Leather Industries	57.23
Social Welfare Workers	55.62
Owners and Managers, Non-metallic Mineral Prod. Industries	55.41
Advertising Salesmen and Agents	55.37
Purchasing Agents and Buyers	55.22
Insurance Salesmen and Agents	55.19
Owners and Managers, Clothing Industries	54.77
Science and Engineering Technicians, n.e.s.	54.75
Brokers, Agents and Appraisers	54.74
Owners and Managers, Provincial Administration	54.54
Artists, Commercial	54.06
Owners and Managers, Transportation, Communication, and other Utilities	53.85
Owners and Managers, Wholesale Trade	53.80
Owners and Managers, Local Administration	53.29
Surveyors	53.25
Commercial Travellers	52.68
Owners and Managers, Furniture and Fixtures Industries	52.11

Occupations	Socio-Economic Index
Teachers and Instructors, n.e.s.	52.07
Stenographers	51.96
Owners and Managers, Food and Beverage Industries	51.70
Radio and Television Equipment Operators	51.51
Physical and Occupational Therapists	51.11
Athletes and Sports Officials	51.11
Musicians and Music Teachers	50.93
Nurses-in-training	49.91
Bookkeepers and Cashiers	49.55
Funeral Directors and Embalmers	49.47
Foremen, Transportation Equipment Industries	49.21
Foremen, Primary Metals Industries	49.11
Real Estate Salesmen and Agents	48.74
Medical and Dental Technicians	48.56
Photoengravers	48.26
Photographers	48.07
Engravers, except Photoengravers	47.95
Ticket, Station and Express Agents, Transport	47.61
Batch and Continuous Still Operators	47.60
Office Appliance Operators	47.12
Owners and Managers, Construction Industries	46.95
Foremen, Electric Power, Gas and Water Utilities	46.75
Power Station Operators	46.20
Locomotive Engineers	45.99
Conductors, Railroad	45.68
Owners and Managers, Wood Industries	45.52
Owners and Managers, Miscellaneous Services	45.48
Foremen, Paper and Allied Industries	45.36
Owners and Managers, Motion Pictures and Recreational Services	45.19
Linemen and Servicemen -- Telephone, Telegraph and Power	45.05
Foremen, Other Manufacturing Industries	45.01
Lithographic and Photo-offset Occupations	45.00
Toolmakers, Diemakers	44.82
Inspectors, Construction	44.76
Interior Decorators and Window Dressers	44.37
Foremen, Trade	44.32
Foremen, Mine, Quarry, Petroleum Well	44.27
Telephone Operators	44.20
Owners and Managers, Forestry, Logging	44.00
Actors, Entertainers, and Showmen	43.85
Owners and Managers, Retail Trade	43.69
Mechanics and Repairmen, Office Machines	43.05
Clerical Occupations, n.e.s.	42.98
Mechanics and Repairmen, Aircraft	42.76
Nurses, Graduate	42.57
Compositors and Type-Setters	42.30

Occupations	Socio-Economic Index
Deck Officers, Ship	42.13
Religious Workers	41.84
Members of Armed Forces	41.43
Locomotive Firemen	40.92
Electricians, Wiremen, and Electrical Repairmen	40.68
Auctioneers	40.48
Canvassers and Other Door-to-Door Salesmen	40.23
Breakemen, Railroad	40.22
Paper Makers	40.17
Owners and Managers, Personal Services	40.14
Printing Workers, n.e.s.	40.13
Mechanics and Repairmen, Radio and T.V. Receivers	40.12
Photographic Processing Occupations	40.05
Engineering Officers, Ship	39.86
Millwrights	39.83
Inspectors, Graders and Samplers, n.e.s.	39.82
Inspectors, Examiners, Gaugers--Metal	39.76
Patternmakers (except paper)	39.75
Typists and clerk typists	39.66
Postmasters	39.65
Well-Drillers and Related Workers	39.55
Foremen, All Other Industries	39.54'
Pressmen, Printing	39.49
Telegraph Operators	39.37
Inspectors and Foremen, Transport	39.21
Projectionists, Motion Picture	39.15
Foremen, Textile and Clothing Industries	39.03
Lens Grinders and Polishers; Opticians	38.82
Bookbinders	38.54
Foremen, Food and Beverage Industries	38.21
General Foremen, Construction	37.90
Operators, Electric Street Railway	37.80
Stationary Enginemen	37.79
Rolling Mill Operators	37.76
Chemical and Related Process Workers	37.75
Prospectors	37.73
Foremen, Wood and Furniture Industries	37.63
Sales Clerks	37.14
Machinists and Machine Tool Setters	36.90
Jewellers and Watchmakers	36.55
Civilian Protective Service Occupations	35.80
Stewards	35.32
Farm Managers and Foremen	35.05
Other Occupations in Bookbinding	34.97
Baggagemen and Expressmen, Transport	34.85
Metal Treating Occupations, n.e.s.	34.79
Mechanics and Repairmen, n.e.s.	34.77
Riggers and Cable Splicers, except Telephone and Telegraph and Power	34.77

Occupations	Socio-Economic Index
Furnacemen and Heaters--Metal	34.75
Cellulose Pulp Preparers	34.69
Stock Clerks and Storekeepers	34.63
Logging Foremen	34.61
Beverage Processors	34.44
Plumbers and Pipefitters	34.38
Heat Treaters, Annealers, Temperers	34.09
Paper Making Occupations, n.e.s.	34.07
Hoistmen, Cranemen, Derrickmen	34.06
Inspectors, Graders, Scalers--Log and Lumber	33.80
Electrical and Electronics Workers, n.e.s.	33.80
Switchmen and Signalmen	33.76
Fitters and Assemblers--Electrical and Electronics Equipment	33.57
Sheet Metal Workers	33.49
Metal Drawers and Extruders	33.40
Miners	33.38
Bartenders	33.29
Insulation Appliers	33.22
Roasters, Cookers and Other Heat Treaters, Chemical	33.14
Furriers	33.03
Boilermakers, Platers and Structural Metal Workers	32.93
Welders and Flame Cutters	32.79
Timbermen	32.61
Tire and Tube Builders	32.34
Filers, Grinders, Sharpeners	32.18
Service Workers, n.e.s.	32.17
Nursing Assistants and Aides	32.14
Shipping and Receiving Clerks	32.14
Millmen	32.13
Bus Drivers	31.86
Forest Rangers and Cruisers	31.85
Metal Working Machine Operators	31.67
Quarriers and Related Workers	31.61
Moulders	31.32
Porters, Baggage and Pullman	31.30
Mechanics and Repairmen, Motor Vehicle	31.30
Mechanics and Repairmen, Railroad Equipment	31.29
Fitters and Asemblers--Metal	31.28
Crushers, Millers, Calenderers--Chemical	31.12
Electroplaters, Dip Platers and Related Workers	31.07
Cutters, Markers--Textiles; Garment and Glove Leather	31.06
Production Process and Related Workers, n.e.s.	31.00
Lodging and Boarding Housekeepers	30.94
Barbers, Hairdressers, and Manicurists	30.94
Cabinet and Furniture Makers, Wood	30.88

Occupations	Socio-Economic Index
Driver -- Salesmen	30.74
Labourers, Primary Metal Industries	30.68
Metalworking Occupations, n.e.s.	30.60
Deck Ratings (ship), Barge Crews and Boatmen	30.56
Paper Products Makers	30.53
Postmen and Mail Carriers	30.52
Service Station Attendants	30.48
Butchers and Meat-cutters	30.48
Meat Canners, Curers, Packers	30.48
Motormen (vehicle) (except railway)	30.48
Waiters	30.47
Hawkers and Peddlars	30.43
Oilers and Greasers--Machinery and Vehicles (except ship)	30.43
Tobacco Preparers and Products Makers	30.39
Upholsterers	30.27
Tailors	30.26
Labourers, Trade	30.19
Bleachers and Dyers--Textiles	30.18
Painters (Construction and Maintenance), Paperhangers and Glaziers	30.08
Taxi Drivers and Chauffeurs	30.07
Operators of Earth-Moving and Other Construction Machinery	30.03
Painters (except Construction and Maintenance)	30.00
Coremakers	30.00
Baby Sitters	29.99
Labourers, Mine	29.96
Blacksmiths, Hammermen, Forgemen	29.93
Bricklayers, Stonemasons, Tilesetters	29.93
Attendants, Recreation and Amusement	29.92
Plasterers and Lathers	29.90
Other Food Processing Occupations	29.89
Bottlers, Wrappers, Labellers	29.80
Clay, Glass and Stone Workers, n.e.s.	29.77
Materials--Handling Equipment Operators	29.76
Labourers, Paper and Allied Industries	29.73
Carpenters	29.71
Vulcanizers	29.62
Fruit and Vegetable Canners and Packers	29.60
Other Rubber Workers	29.51
Labourers, Communication and Storage	29.51
Milk Processors	29.49
Cooks	29.43
Construction Workers, n.e.s.	29.43
Longshoremen and Stevedores	29.41
Truck Drivers	29.31
Gardeners (except farm) and Groundskeepers	29.27

Occupations	Socio-Economic Index
Bakers	29.26
Labourers, Electric Power, Gas and Water Utilities	29.26
Messengers	29.23
Warehousemen and Freight Handlers	29.18
Polishers and Buffers--Metal	29.12
Boiler Firemen (except ship)	29.10
Labourers, All Other Industries	28.96
Launderers and Dry Cleaners	28.93
Other Agricultural Occupations	28.93
Dressmakers and Seamstresses	28.77
Riveters and Rivet-Heaters	28.76
Millers of Flour and Grain	28.75
Furnacemen and Kilnmen, Ceramics and Glass	28.69
Knitters	28.68
Transport Occupations, n.e.s.	28.63
Labourers, Other Public Administration and Defence	28.61
Woodworking Occupations, n.e.s.	28.56
Stone Cutters and Dressers	28.52
Apparel and Related Products Makers	28.44
Tanners and Tannery Operatives	28.42
Sawyers	28.29
Woodworking Machine Operators	28.29
Labourers, Other Manufacturing Industries	28.22
Janitors and Cleaners, Building	28.22
Labourers, Food and Beverage Industries	28.12
Kitchen Helpers and Related Service Workers	28.11
Engine-room Ratings, Firemen and Oilers, Ship	28.11
Newsvendors	28.08
Labourers, Railway Transport	28.03
Finishers and Calenderers	27.97
Elevator Tenders, Building	27.96
Shoemakers and Repairers, Not in Factory	27.87
Sewers and Sewing Machine Operators	27.87
Cement and Concrete Finishers	27.86
Guides	27.79
Farm Labourers	27.77
Labourers, Transportation, except Railway	27.72
Labourers, Wood Industries	27.57
Labourers, Transportation Equipment Industries	27.49
Other Textile Occupations	27.44
Carders, Combers and Other Fibre Preparers	27.37
Labourers, Construction	27.25
Other Leather Products Makers	27.19
Fishermen	27.17
Leather Cutters	27.10
Loom Fixers and Loom Preparers	27.09
Lumbermen, including Labourers in Logging	27.01
Spinners and Twisters	26.94

Occupations	Socio-Economic Index
Weavers	26.77
Seamsters	26.71
Labourers, Local Administration	26.71
Winders and Reelers	26.63
Sectionmen and Trackmen	26.57
Labourers, Textile and Clothing Industries	26.56
Shoemakers and Repairers -- In Factory	26.56
Fish Canners, Curers, and Packers	26.09
Trappers and Hunters	25.36